

Call for action on recognizing the critical role of taxonomy to underpin transformative change within the post-2020 Global Biodiversity Framework

The participants in the Global Taxonomy Initiative (GTI) Forum, held from 2-4 December 2020, agree with the following statement, addressed to CBD Parties and relevant stakeholders involved in drafting and implementation of the post-2020 Global Biodiversity Framework.

Taxonomy is the fundamental scientific discipline underpinning biodiversity discovery and understanding. As such, attainment of the goals of the Global Biodiversity Framework depend on effective action both to maintain and strengthen long-established taxonomic expertise, and to support the many innovations enabling unprecedented discovery of the Earth's biodiversity as well as the sharing of data and information to support conservation and sustainable development.

Taxonomy must be recognized and fully integrated into all components of the Global Biodiversity Framework. This includes, but is not confined to:

- The 2030 action targets of the framework
- The implementation support mechanisms of the framework, especially capacity development, technical and scientific cooperation, and knowledge generation

Development of capacity in taxonomy is critical to the successful implementation of the Global Biodiversity Framework. This includes support for developing taxonomic infrastructure and capacity in all countries and regions, and for ensuring that such skills are passed to new generations, to underpin and enhance understanding of biodiversity in all places on Earth. Increased investment in education, training and career opportunities in taxonomy is urgently needed to prevent an overall decline in taxonomic research, and to promote continued expertise and taxonomic literacy among younger professionals and future generations engaged in conservation.

Innovative and emerging technologies provide unprecedented opportunities for generating and sharing knowledge about the biosphere, when combined with essential taxonomic knowledge, techniques and skills. Such opportunities include:

- Harnessing the immense knowledge base accumulated in natural history collections of all sizes and in all regions, through digitization and sharing of data on preserved specimens using common standards to enable universal discovery, access and use
- Generation and sharing of data arising from technological improvements in genetic sequencing of organisms in nature, for example through environmental metagenomics, enabling planetary-scale understanding of species, surveillance of their dynamics, and acceleration of species discovery
- Providing digital access to taxonomic literature and associated archives, both through digitization of historic materials, and rapid integration of newly-published taxonomic discoveries and treatments into the global knowledge base

- Engagement of citizens, indigenous peoples and local communities in observation and documentation of evidence on biodiversity occurrence in space and time, through bringing together volunteer networks, taxonomic expertise and user-friendly applications to register, share and access biodiversity data; thereby encouraging bio-literacy and public participation in conservation and sustainable use of biodiversity
- Enabling conservation of all branches of the Tree of Life as an essential component of addressing biodiversity loss, by recognizing the evolutionary framework underlying taxonomy, and incorporating phylogenetic and systematics information with spatial data on species distribution and occurrences
- Enabling improved management, assessment, and surveillance in order to prevent negative impacts on biodiversity and human well-being, including through improved biosecurity measures

The goals of the Global Biodiversity Framework will only be realized through active and effective collaborations and connections among all relevant taxonomic initiatives at all scales. Such ongoing collaboration must avoid duplication of effort, and enable integration of data and information within a shared knowledge network, based on inclusive participation and transparent governance, as well as effective and efficient use of available resources.

We commit to engaging fully with the Parties to the CBD to ensure that taxonomy is well reflected in the post-2020 Global Biodiversity Framework. In particular, we feel it is essential that taxonomy continues to feature as a strong component of the programmes for technical and scientific cooperation under the CBD, building on the GTI network of focal points and partners, pending the inclusive review process for review and renewal of these programmes, to be submitted for approval at COP15.

Participants on behalf of Parties¹

Miguel Gonzalo Andrade Correa, Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Colombia;
 Hugo de Boer, Natural History Museum, University of Oslo, Norway;
 Ethan Hillel Freid, Bahamas National Trust, Leon Levy Native Plant Preserve, Bahamas;
 Christoph Häuser, Museum für Naturkunde Berlin, Germany;
 Diana Hernández, Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO), Mexico;
 N'Goran Germain Kouamé, Université Jean Lorougnon Guédé, Côte d'Ivoire;
 Hai-Ning Qin, Institute of Botany, Chinese Academy of Sciences, China;
 Ramagwai Sebola, South African National Biodiversity Institute (SANBI), South Africa;
 Aleksandr Aleksandrovich Shestopal, Centre for Prevention of Dangerous Infections, Ministry of Health and Medical Industry of Turkmenistan, Turkmenistan;
 Mohammed Sghir Taleb, Institut Scientifique, Université Mohammed V de Rabat, Morocco;
 Ta Thi Kieu Anh, Nature and Biodiversity Conservation Agency, Ministry of Natural Resources and Environment, Vietnam;
 Jolien Venneman, Royal Belgian Institute of Natural Sciences, Belgium.

¹ [CBD notification 2020-031](#)

Participants on behalf of expert organizations and resource persons²

Thomas Borsch, Botanic Garden and the Botanical Museum Berlin, Germany;
Paul Hebert, Centre for Biodiversity Genomics, University of Guelph, Canada;
Tim Hirsch, Global Biodiversity Information Facility (GBIF), Denmark;
Donald Hobern, International Barcode of Life Consortium (iBOL), Australia;
Michelle Price, Consortium of European Taxonomic Facilities (CETAF), International Association for Plant Taxonomy (IAPT), Conservatory and Botanical Garden of Geneva, Switzerland;
Mark Watson, Royal Botanic Garden Edinburgh, United Kingdom of Great Britain and Northern Ireland.

Self-registered participants

Donat Agosti, Plazi, Switzerland;
Mónica Alegre González, Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO), Mexico;
Luis Amador, Universidad Austral de Chile, Chile;
Rogelio II Andrada, University of the Philippines, Philippines;
Maria Izilda Andrade, Instituto Lauro Souza Lima, Brazil;
Annawaty Annawaty, Universitas Tadulako, Indonesia;
Abdelhamid Azeroual, Hassan First University of Settat, Morocco;
Inessa Bagatini, Federal University of São Carlos, Brazil;
Juliana Bahia, Museum für Naturkunde Berlin, Germany;
Olaf Banki, Species 2000, Catalogue of Life, Netherlands;
Mercedes Barrios, Centro de Estudios Conservacionistas, Universidad de San Carlos de Guatemala, Guatemala;
Luís Batista, Federal University of Lavras, Brazil;
Hatem Belgacem, Ministry of Local Affairs and Environment, Tunisia;
Reda Benhima, Ministry of the Environnemnt, Morocco;
Martha Bernabet, Fundacion Conservacion y Desarrollo Bolivia, Bolivia;
José Augusto Pires Bitencourt, Instituto Tecnológico Vale, Brazil;
Bonnie Blaimer, Museum für Naturkunde Berlin, Germany;
Mariana Boité, Fundação Oswaldo Cruz, Brazil;
Israel Borokini, University of Nevada, Reno, United States of America;
Pierluigi Bozzi, International University Network on Cultural and Biological Diversity, Kenya;
Peter Buchanan, Manaaki Whenua - Landcare Research, New Zealand;
Eliana Buenaventura, Museum für Naturkunde Berlin, Germany;
Carlos Callangan, ASEAN Centre for Biodiversity, Philippines;
Leandro Capurro, Universidad de la Republica Uruguay, Uruguay;
Elizabeth Cárdenas, Ministerio del Ambiente, Peru;
Cecilia Carmaran, Universidad de Buenos Aires-Consejo Nacional de Investigaciones Científicas y Técnicas (UBA-CONICET), Argentina;
Geyby Tatiana Carrillo Apolo, Incabiotec, Peru;
Ana Carrion, Pontificia Universidade Católica do Rio Grande do Sul, Fundação Estadual de Proteção Ambiental (FEPAM), Brazil;

² [CBD notification 2020-031](#)

Jessika Carvajal, Instituto Amazónico de Investigaciones Científicas SINCHI, Colombia;
Gervásio Carvalho, Pontifícia Universidade Católica do Rio Grande do Sul, Brazil;
Ana Casino, Consortium of European Taxonomic Facilities (CETAF), Belgium;
Nicolas Castaño, Instituto Amazónico de Investigaciones Científicas SINCHI, Colombia;
Manuel Castillo, University of the Philippines Los Banos College of Forestry and Natural Resources, Philippines;
Marlène Cayeux, Organisation pour le Respect de l'Environnement dans l'Entreprise (ORÉE), France;
Stefania Cevallos, Universidad Técnica Particular de Loja, Ecuador;
Christine von Weizsaecker, European Network for Ecological Reflection and Action (ECOROPA), Germany;
Richard C. K. Chung, Forest Research Institute Malaysia (FRIM), Malaysia;
Chiarolla Claudio, Secretariat of the Convention on Biological Diversity (SCBD), France;
Alexandra Coelho, Secretariat of the Convention on Biological Diversity (SCBD), Canada;
Daniel Cooney, The Understanding Group, United States of America;
Xavier Cornejo, Herbario GUAY, Universidad de Guayaquil, Ecuador;
Mariana Cosse, Instituto de Investigaciones Biológicas Clemente Estable, Uruguay;
Josue Jose da SILVA, Instituto de Tecnologia de Alimentos (ITAL), Brazil;
Cecilia Da Silva, Universidad de la Republica Uruguay, Uruguay;
Domingos da Silva Leite, University of Campinas, Brazil;
Ulrike Damm, Senckenberg Gesellschaft für Naturforschung, Germany;
Soumana Datta, University of Rajasthan, India;
Sami Dhouib, WWF North Africa, Tunisia;
Carliz Diaz, Ministerio del Poder Popular para el Ecosocialismo-Dirección General de Diversidad Biológica, Venezuela;
Oliver Dilly, German Aerospace Center (DLR), Germany;
Yeshi Dorji, National Environment Commission Secretariat, Bhutan;
Pauline Carmel Eje, Association of Southeast Asian Nations (ASEAN) Centre for Biodiversity, Philippines;
Christian Elloran, Association of Southeast Asian Nations (ASEAN) Centre for Biodiversity, Philippines;
Josefina Enfedaque, European Commission, Belgium;
Darja Erjavec, Institute of the Republic of Slovenia for Nature Conservation, Slovenia;
Bolanle Fagbola, National Horticultural Research Institute, Nigeria;
Joaquín Fava, Dirección Nacional de Biodiversidad, Ministerio de Ambiente y Desarrollo Sostenible, Argentina;
Diana Fernandes, Environmental Protection Agency, Guyana;
Roberto Fernandez, BioAlfa, Costa Rica;
Lilian Ferrufino, Escuela de Biología, Universidad Nacional Autónoma de Honduras, Honduras;
Wagner Fischer, Ministry of Environment, Brazil;
Mohamed Reda Fishar, National Institute of Oceanography and Fisheries, Egypt;
Hilda Flores, Instituto de Biología, Mexico;
Francisco L. Franco, Instituto Butantan, São Paulo, Brazil;
Alina Freire-Fierro, Ikiam Universidad Regional Amazónica, Ecuador;
Celia G de Siqueira, Universidade Federal de Sergipe, Brazil;
Rhia Galsim, Association of Southeast Asian Nations (ASEAN) Centre for Biodiversity, Philippines;

Catalina García Castillo, Ministerio de Ambiente y Desarrollo Sostenible, Colombia;
Bertha Cecilia Garcia Cienfuegos, National University of Tumbes, Peru;
Britta Garfield, Smithsonian Institution, United States of America;
Andre Gasper, Universidade Regional de Blumenau, Brazil;
Maria Mercedes Gavilanez, Universidad Central Del Ecuador, Ecuador;
Charlotte Germain-Aubrey, Secretariat of the Convention on Biological Diversity (SCBD),
Canada;
Abebe Getahun, Addis Ababa University, Ethiopia;
Mohamed Ghamizi, Muséum d'Histoire Naturelle de Marrakech, Morocco;
Rusea Go, Universiti Putra Malaysia, Malaysia;
Philippe Grandcolas, Centre National de la Recherche Scientifique (CNRS), Museum
National d'Histoire Naturelle, Paris, France;
Jing Guan, Foreign Economic Cooperation Office (FECO), China;
Louise Guillot, POLITICO Europe, Belgium;
Laurinette Gutierrez, Instituto Amazónico de Investigaciones Científicas SINCHI, Colombia;
Henry Guzmán, Consortium for Provincial Governments of Ecuador (CONCOPE), Ecuador;
Winnie Hallwachs, University of Pennsylvania, Guanacaste Dry Forest Conservation Fund,
Area de Conservacion Guanacaste, Costa Rica;
Ichiro Hama, Secretariat of the Convention on Biological Diversity (SCBD), Canada;
Brian Hand, University of Montana, Flathead Lake Biological Station, United States of
America;
Nils Hein, The Zoological Research Museum Alexander Koenig, Bonn, Germany;
Rob Hendriks, Ministry of Agriculture, Nature and Food Quality, Netherlands;
Patrick Herendeen, International Association for Plant Taxonomy, United States of America;
Jana Horak, Amgueddfa Cymru-National Museum Wales, United Kingdom of Great Britain
and Northern Ireland;
Natali Hurtado, Centro de Investigación Biodiversidad Sostenible, Peru;
Jemilat Ibrahim, National Institute for Pharmaceutical Research and Development, Nigeria;
Marco Miguel Iglesias, Pontificia Universidade Católica do Rio Grande do Sul, Brazil;
Mochamad Indrawan, Research Center for Climate Change, Universitas Indonesia,
Indonesia;
Daniel Janzen, University of Pennsylvania, Guanacaste Dry Forest Conservation Fund, Area
de Conservacion Guanacaste, Costa Rica;
Eloundou Josephine, Ministry of Environment, Cameroon;
Arun Jugran, G. B. Pant National Institute of Himalayan Environment, India;
Alana Jute, Institute of Marine Affairs, Trinidad and Tobago;
Firdavs Kabilov, Westminster International University in Tashkent, Uzbekistan;
Gila Kahila Bar-Gal, The Hebrew University of Jerusalem, Israel;
Ludwig Kammesheidt, German Aerospace Center (DLR), Germany;
Madan Kumar Khadka, Department of Plant Resources, Ministry of Forests and Environment,
Nepal;
Solomon Kipkoeh, East African Herbarium, National Museums of Kenya, Kenya;
Bernard Kirui, Egerton University, Kenya;
Ryo Kohsaka, Nagoya University, Japan;
Kouami Kokou, University of Lome, Togo;
Biju Kumar, University of Kerala, India;
Melissa Laverde, Ministry of Environment and Sustainable Development, Colombia;
Jaeho Lee, Republic of Korea;

Johan Liljeblad, Swedish University of Agricultural Sciences, Sweden;
Chae Eun Lim, National Institute of Biological Resources, Republic of Korea;
Tatsiana Lipinskaya, Scientific and Practical Center for Bioresources of the National Academy of Sciences of Belarus, Belarus;
Diego Lizcano, Sociedad Colombiana de Mastozoología, Colombia;
Cornelia Löhne, Bonn University Botanic Gardens, Germany;
Anna Loy, University of Molise, Italy;
Chris Lyal, Natural History Museum, United Kingdom of Great Britain and Northern Ireland;
Gyanpriya Maharaj, University of Guyana, Guyana;
Pastor Malabrigo Jr., University of the Philippines Los Baños, Philippines;
Karol Marhold, Slovak Academy of Sciences, Slovakia;
Luciane Marinoni, Universidade Federal do Paraná, Brazil;
Jose Eduardo Mejia De Loayza, Pontifícia Universidade Católica do Rio Grande do Sul, Brazil;
Luciana Melchert, Brazil;
Patricia Mergen, Meise Botanic Garden, Royal Museum for Central Africa, Belgium;
Jean Bruno Mikissa, Ecole Nationale des Eaux et Forêts, Gabon;
Scott Miller, Smithsonian Institution, United States of America;
José Efraín Miranda Yuquilema, Universidad de Cuenca, Ecuador;
Yasuaki Miyamoto, Japan Civil Network for the United Nations Decade on Biodiversity (UNDB), Japan;
Mohsen Mofidi-Neyestanak, Agricultural Research, Education and Extension Organization, Iranian Research Institute of Plant Protection, Iran;
Djessy Monnier, Secretariat of the Convention on Biological Diversity (SCBD), Canada;
Carolina Monteiro, Fundação Oswaldo Cruz (FIOCRUZ), Brazil;
Emilce Mora, Minambiente, Colombia;
Gustavo Morejon, SAVE.bio, Ecuador;
Bariushaa Munkhtsog, Institute of Biology, Mongolian Academy of Sciences, Mongolia;
Sofia Munoz, Instituto Nacional de Investigación en Salud Pública, Ecuador;
Kakha Nadiradze, Association for Farmers Rights Defense (AFRD), Georgia;
Mary Namaganda, Makerere University, Uganda;
Tae-Kwon Noh, Republic of Korea;
Dawn Nwokobia, Centre for Sustainable Development, Nigeria;
Chinyere Okorie, Department of Forestry, Nigeria;
Nora Oleas, Universidad Indoamérica, Ecuador;
Mariela Osorno, Instituto Amazónico de Investigaciones Científicas SINCHI, Colombia;
Mirna Oviedo, Universidad Técnica de Manabí, Ecuador;
Maria Panitsa, Division of Plant Biology, Department of Biology, University of Patras, Greece;
Williams Paredes Munguia, Pontificia Universidade Católica do Rio Grande do Sul, Brazil;
Chan-Ho Park, Genetic Resources Information Center, National Institute of Biological Resources, Republic of Korea;
Alan Paton, Royal Botanic Gardens Kew, United Kingdom of Great Britain and Northern Ireland;
Aura Paucar, Universidad Nacional de Loja, Ecuador;
Carla Simone Pavanelli, Universidade Estadual de Maringá, Brazil;
Simón Pérez Pérez-Martínez, Universidad Estatal de Milagro, Ecuador;
Jenny Phillips, BioAlfa, Costa Rica;
Balakrishna Pisupati, United Nations Environment Programme (UNEP), India;

Shijith Puthan Purayil, Mahatma Gandhi Government Arts College, India;
Aijaz Ahmad Qureshi, Islamic University of Science & Technology, India;
Manzoor Qureshi, Gigit Baltistan Rural Support Programme, Pakistan;
Adriana Radulovici, University of Guelph, Canada;
Kamal Rai, Indigenous Knowledge and Peoples Network Society for Wetland Biodiversity Conservation Nepal in Federation of Kirat Indigenous, Nepal;
Thiago Ramos, Universidad Privada Del Este, Brazil;
Phuttatida Rattana, Office of Natural Resources and Environmental Policy and Planning, Thailand;
Mariana Ribeiro Maia, Brazil;
Mouna Rifi, National Agronomic Institute of Tunisia, Tunisia;
Maria Herminia Cornejo Rodriguez, State University of Peninsula de Santa Elena, Ecuador;
Xavier Astudillo Romero;
Santiago Ron, Pontificia Universidad Católica del Ecuador, Ecuador;
Alix Rosa Mary, Instituto Amazónico de Investigaciones Científicas SINCHI, Colombia;
Sharon Ruthia, Kenya;
Chinara Sadykova, RCE Kyrgyzstan, Kyrgyzstan;
Manda Safavi, Environmental Protection Authority, New Zealand;
Carlos Salas, Universidad Técnica de Manabí, Ecuador;
Brenda Salles, Universidade Estácio de Sá, Brazil;
Serigne Sarr, Université Alioune Diop de Bambey, Senegal;
Edmund Schiller, Natural History Museum Vienna, Austria;
Hendrik Segers, Royal Belgian Institute of Natural Sciences, Belgium;
Gono Semiadi, Indonesian Institute of Sciences, Indonesia;
Bruno Senterre, National Herbarium, Seychelles;
Tatiana Sepulveda, Universidade Federal do Parana, Brazil;
Li Shi, Inner Mongolia Agricultural University, China;
Muhammad Ibrar Shinwari, International Islamic University Islamabad, Pakistan;
Diana Sietz, Potsdam Institute for Climate Impact Research, Germany;
Walter Aurelio Simbaña Ayo, Ecuador;
Paramjit Singh, Botanical Survey of India, India;
Angel Solis, BioAlfa, Costa Rica;
Roxana Solis, Ministerio del Ambiente, Peru;
Douglas Soltis, University of Florida, United States of America;
Pamela Soltis, University of Florida and Integrated Digitized Biocollections (iDigBio), United States of America;
Nike Sommerwerk, Museum für Naturkunde Berlin, Germany;
Ruth Spencer, Barnes Hill Community Development Organization, Antigua and Barbuda;
Carol Stepien, University of Washington, United States of America;
Wataru Suzuki, Secretariat of the Convention on Biological Diversity (SCBD), Canada;
Valeria Terán, Secretaría de Educación Superior, Ciencia, Tecnología e Innovación, Ecuador;
Birthe Thormann, German Federal Agency for Nature Conservation, Germany;
Marija Tomasic, Ministry of Economy and Sustainable Development, Croatia;
Juan Pablo Torres Florez, Instituto Chico Mendes de Conservação da Biodiversidade, Centro Nacional de Pesquisa e Conservação de Mamíferos Aquáticos, Brazil;
Indah Trisnawati, Indonesia;
Tariman Tumber, Secretariat of the Convention on Biological Diversity (SCBD), Canada;

Verônica Viana Vieira, Fundação Oswaldo Cruz (FIOCRUZ), Brazil;
Erika Villagómez, Secretaría de Educación Superior, Ciencia, Tecnología e Innovación,
Ecuador;
Nelson Gustavo Vinuesa Vásquez, Universidad Técnica Particular de Loja, Ecuador;
Thomas von Rintelen, Museum für Naturkunde Berlin, Germany;
Heike Wägele, Zoological Research Museum Alexander Koenig, Germany;
Peter Wilkie, Royal Botanic Garden Edinburgh, United Kingdom of Great Britain and Northern
Ireland;
Peter Wyse Jackson, Missouri Botanical Garden, United States of America;
Mari Yamazaki, Ministry of the Environment, Japan;
Mario H. Yáñez-Muñoz, Instituto Nacional de Biodiversidad, Ecuador;
Rachael Young, YAYAYA, Field Notes Food Co LLC, United States of America;
Pramana Yuda, Universitas Atma Jaya Yogyakarta, Indonesia;
Angela Zanata, Universidade Federalda Bahia, Brazil;
Lejia Zhang, Museum für Naturkunde Berlin, Germany;
Martin Zimmer, Leibniz Zentrum für Marine Tropenforschung, Bremen, Germany;
Alejandro Zuluaga, Universidad del Valle, Colombia.